FRUIT AND VEGETABLES

Why is it important to eat fruit and vegetables?
Many athletes understand the significance of consuming carbohydrates, protein, and fat, however, calories and weight are not the only reason it is important to eat food. Fruits and vegetables contain many micronutrients that are very important for maintaining overall health and performance. Further, many micronutrients are not synthesized by the body and thus, fruit and vegetable intake is critical for meeting micronutrient needs. In regards to sport, a diet rich in fruit and vegetables plays a crucial role in:

- Optimizing performance during exercise
- Energy production
- Tissue repair
- Bone integrity
- Eye health

Suboptimal intakes of fruit and vegetables by athletes who are exercising intensely can lead to:

- Muscle damage
- Lack of muscle strength
- Fatigue
- Impaired immune function

Nutrients, minerals, and potential performance benefits
Many nutrients and minerals are found in fruits and vegetables including:

**Vitamin C** – Is very important in the synthesis of collagen, which is essential for connective tissue stability and wound healing. It also enhances iron absorption from non-meat sources and is required for the function of hormones involved in stress reactions. Vitamin C is a water soluble vitamin and is not stored in large quantities in the body. Any extra amount of vitamin C consumed is lost through urine, therefore it is important to include vitamin C rich foods in your everyday diet.

- **Food sources**: red and green bell peppers, broccoli, brussel sprouts, snow peas, cauliflower, guava, papaya, kiwi, oranges, lychee, strawberries, pineapple, and grapefruit.

**Vitamin E** – Is an important antioxidant particularly at the site of the muscle and enhances physical performance at altitude. It also can contribute to athletic performance through optimizing blood viscosity and playing a role in improving immune function.

- **Food sources**: cooked spinach, tomato sauce, turnips, swiss chard, peppers, and avocados

**Vitamin K** – Is important for blood clotting and bone health.

- **Food sources**: liver, eggs, green leafy vegetables, cheese, butter and is also formed in the intestine by bacteria
Magnesium and Potassium – These minerals play an important role in energy production, nerve function and muscle contraction, relaxation, and strength.

- **Food sources**: green colored vegetables, bananas, avocados, and apricots

B Vitamins (thiamin, niacin, riboflavin, folate, B6 and B12) – Are important for energy metabolism, nerve contraction and muscle contraction.

- **Food sources**: you can get all of your B-vitamins by eating a variety of foods found in all four food groups, some vegetable sources of some of the B-vitamins are listed below
  - Thiamin: soybean sprouts, edamame, green peas, and squash
  - Folate: edamame, spinach, broccoli, asparagus, brussel sprouts, and beets
  - Riboflavin: mushrooms and spinach
  - Niacin: mushrooms and potatoes
  - B6: green vegetables
  - B12: Animal products are the only source of B12 in the diet. Those avoiding animal products will need to take supplemental B12.

**Ways to include more fruit and vegetables in your diet**

- **Boost your breakfast**: get an extra fruit or vegetable serving for the day by adding in fresh/frozen berries or banana slices to oatmeal and cereal OR add a handful of spinach to scrambled eggs OR make a breakfast smoothie
- **Double up**: don’t be afraid to double the amount of veggies in certain recipes (e.g. salads, soups, pastas, pizzas etc.), a little extra chopping can go a long way for your vegetable intake
- **Be sneaky**: add grated or pureed veggies into pasta sauces, meatloaf’s, and baked goods (e.g. cauliflower, zucchini, carrots)
- **Plan your snacks**: pre-cut fruit and veggies into snack sized portions for quick and easy snacking throughout the day
- **Don’t forget dessert**: if you are craving something sweet after a meal you can freeze bananas, grapes, or blueberries to enjoy as a refreshing treat (optional: freeze fruit dipped in yogurt or dark chocolate)